

WHAT IS CLAIMED IS:

1. A method for manufacturing a microlens array comprising:
providing a bundle of optically transparent members;
cutting the bundle of optically transparent members to form at least one sheet of optically transparent member segments; and
heating the at least one sheet of optically transparent member segments to form lens segments.
2. The method of Claim 1, further comprising modifying at least one end of the at least one sheet of optically transparent member segments.
3. The method of Claim 2, wherein said modifying comprises modifying both ends of said optically transparent member segments.
4. The method of Claim 1, wherein said providing comprises adhering said optically transparent members together using an adhesive to form a honeycomb-like structure.
5. The method of Claim 1, wherein said optically transparent members comprise a material taken from the group consisting of glass, polymer and plastic.
6. The method of Claim 1, wherein said heating comprises heating an end of each optically transparent member segment to form a lens surface thereon.
7. The method of Claim 6, wherein said lens surface comprises a convex, concave or planar lens surface.
8. The method of Claim 1, wherein said heating comprises heating both ends of each optically transparent member segment to form a lens surface thereon.
9. The method of Claim 1, wherein said at least one sheet comprises a thickness of between about 100 μm and 1 mm.

10. The method of Claim 1, wherein said at least one sheet comprises a thickness of greater than 1 mm.

11. The method of Claim 1, wherein said heating comprises placing said at least one sheet of optically transparent member segments into a furnace to expose ends of said optically transparent member segments to a heat source.

12. The method of Claim 1, wherein said heating comprises exposing said at least one sheet of optically transparent member segments to an energy source.

13. A method for manufacturing a microlens array comprising:
providing optically transparent cylindrical rods bundled together to form a structure having a cross section that resembles a honeycomb-like structure;
cutting the bundle of optically transparent cylindrical rods to form at least one sheet of optically transparent rod segments, each optically transparent rod segment having a first end and a second end; and
heating at least one of said ends to form a lens surface on said ends.

14. The method of Claim 13, wherein said providing comprises adhering said optically transparent cylindrical rods together using a UV curable adhesive to form said bundle.

15. The method of Claim 13, wherein said optically transparent cylindrical rods comprise a material taken from the group consisting of glass, polymer and plastic.

16. The method of Claim 13, further comprising modifying the shape of at least one end of each optically transparent rod segment.

17. The method of Claim 13, wherein said lens surface comprises a convex, concave or planer lens surface.

18. The method of Claim 13, wherein said at least one sheet of optically transparent member segments comprises a thickness of between about 100 μm and about 1 mm.

19. The method of Claim 13, wherein said heating comprises placing said at least one sheet of optically transparent rod segments into a furnace to expose ends of said optically transparent rod segments to an energy source.

20. The method of Claim 13, wherein said heating comprises exposing ends of said optically transparent rod segments to a light source.